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BUMED-Y-TPC
P2-4/LL(06)~~107~~
4 Sep 1943

To: Supply Officer in Command, NSD Mechanicsburg, Pa.

Subj: Health Hazards Involved in Use of Trichlorethylene Degreasers.

Ref: Your ltr to Bulted (13-EFL:PLR) dated 31 Aug 1943.

1. Trichloroethylene, belonging to the group of chlorinated hydrocarbons of the aliphatic series, of which chloroform is the best known representative, is an unsaturated derivative of ethylene.
2. Exposure to trichloroethylene vapors constitutes a potential health hazard. The maximum allowable concentration for an eight-hour daily exposure is 200 p.p.m.
3. The manufacturers of degreasing tanks have prepared comprehensive instructions for the safe operation of their equipment. These instructions include information relative to speed of operation, precautions against decomposition of the solvent, technique of cleaning tank, etc., and they should be carefully followed in the plant operation.
4. It is considered that the solvent vapors will be low enough to prevent a health hazard when (1) the tanks are small (not over 10 square feet in cross-sectional area), (2) the heat input and cooling capacity of the cooling coils are carefully regulated, (3) the tanks are located in large rooms with high ceilings and not near open doors or windows, (4) the withdrawal rate of the cleaned objects is slow (not more than 12 P.P.M.), and (5) the general room ventilation is good. In case of large tanks, or for any tanks located near open doors or windows or in small rooms, local exhaust ventilation at the tanks is necessary. The exhausted air should be discharged at a point outside the building where it cannot reenter occupied buildings. Tight fitting covers should be employed on degreasing tanks whenever possible.
5. During tank cleaning operations, particularly those in which workers must enter the tanks in the process, approved supplied-air respirators should be worn.

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6. Workers exposed to this solvent should wear protective gloves, sleeves, and aprons made of material not affected by trichlorethylene.

7. There is an industrial hygiene section attached to NavDisp, Philadelphia Navy Yard available for consultation upon request.

ROSS T. McINTIRE
Rear Admiral (MC), USN
Chief of Bureau